

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1-3. (Canceled).

4. (Currently Amended) A transmitting/receiving apparatus comprising:

a channel estimation section that performs channel estimation for a known symbol of a received signal;

a storage section that stores a channel estimation value estimated at said channel estimation section;

~~a channel correlation section that determines a correlation between a known symbol of a received signal received earlier and stored in said storage section and a known symbol of a currently received signal;~~

a determination section that determines a correlation between a known symbol of a received signal received earlier and stored in said storage section and a known symbol of a currently received signal and determines whether or not the said correlation is a value enabling space division multiplexing communication with directivity control by a communicating party;

a weight generating section that generates a transmitting weight from a result of the channel estimation ~~result~~;

a multiplying section that multiplies a transmission signal by the transmitting weight generated at said weight generating section; ~~and~~

a transmitting section that transmits the signal multiplied by the transmitting weight at said multiplying section; [[:]]

a timer section that measures a time said weight generating section takes to generate the transmitting weight; and

a switching section that, when said determination section determines that space division multiplexing communication with directivity control is possible and when the time for generating the transmitting weight, which is measured by said timer section, is less than a predetermined time, outputs the transmitting weight generated by said weight generating section to said multiplying section, and, when said determination section determines that space division multiplexing communication with directivity control is not possible and when the time for generating the transmitting weight, which is measured by said timer section, is equal to or greater than the predetermined time, outputs “1” as the said transmitting weight to said multiplying section.

5. (Canceled).

6. (Currently Amended) A transmitting/receiving apparatus comprising:

a receiving section that receives one of a transmitting weight and a signal including an instruction to perform space division multiplexing communication without directivity control;

a multiplying section that multiplies a transmission signal by the said transmitting weight;

a transmitting section that transmits the transmission signal multiplied by the transmitting weight at said multiplying section;

a timer section that measures a receiving time for the transmitting weight; and
a switching section that, when said receiving section receives the said transmitting weight
and when the receiving time for the transmitting weight, which is measured by said timer section,
is less than a predetermined time, outputs the said received transmitting weight to said
multiplying section, and, when said receiving section receives the signal including the instruction
to perform space division multiplexing communication without directivity control and when the
receiving time is equal to or greater than the predetermined time, outputs “1” as the said
transmitting weight to said multiplying section.

7. (Currently Amended) The transmitting/receiving apparatus according to claim 6,
further comprising a storage section that stores a transmitting weight received earlier at said
receiving section, wherein:

said receiving section receives one of the a transmitting weight, the a signal including an
instruction to perform space division multiplexing communication without directivity control and
a signal indicating that there is no channel fluctuation; and

when said receiving section receives the a transmitting weight and when the receiving
time for the transmitting weight, which is measured by said timer section, is less than the
predetermined time, said switching section outputs the said received transmitting weight to said
storage section and said multiplying section, and, when said receiving section receives the a
signal indicating that there is no channel fluctuation, outputs the transmitting weight stored in
said storage section to said multiplying section.

8. (Canceled).

9. (Currently Amended) A transmitting/receiving method comprising the steps of:

at a transmitting/receiving apparatus:

at a first transmitting/receiving apparatus, performing channel estimation for a received known symbol;

at the first transmitting/receiving apparatus, determining a correlation between a channel estimation value of ~~a~~ the known symbol received earlier and a channel estimation value of ~~a~~ the known symbol currently received, and determining whether or not the correlation is a value enabling space division multiplexing communication with directivity control by a communicating party;

~~determining whether or not said correlation is a value enabling space division multiplexing communication with directivity control by a communicating party;~~

at the first transmitting/receiving apparatus, generating a transmitting weight from a result of the said channel estimation result;

at the first transmitting/receiving apparatus, transmitting the said generated transmitting weight to the said communicating party when the said determination is that space division multiplexing communication with directivity control is possible, and transmitting a signal including an instruction to perform space division multiplexing communication without directivity control to the said communicating party, when the said determination is that space division multiplexing communication with directivity control is not possible; and

~~at said communicating party:-~~

at a second transmitting/receiving apparatus comprising the communicating party,
receiving one of the transmitting weight and the a signal including the an instruction to perform
space division multiplexing communication without directivity control transmitted from the first
said transmitting/receiving apparatus;

at the second transmitting/receiving apparatus, measuring a receiving time for the
transmitting weight;

at the second transmitting/receiving apparatus, multiplying a transmission signal by the
said received transmitting weight when the said transmitting weight is received and when the
receiving time for the transmitting weight is less than a predetermined time, and multiplying the
transmission signal by “1” as the transmitting weight when the said signal including the an
instruction to perform space division multiplexing communication without directivity control is
received and when the receiving time for the transmitting weight is equal to or greater than the
predetermined time; and

at the second transmitting/receiving apparatus, transmitting the transmission signal
multiplied by the said transmitting weight to the first said transmitting/receiving apparatus.

10. (Currently Amended) A transmitting/receiving method comprising the steps of:
performing channel estimation for a received known symbol;
determining a correlation between a known symbol received earlier and a known symbol
currently received and determining whether or not the correlation is a value enabling space
division multiplexing communication with directivity control by a communicating party;

determining whether or not said correlation is a value enabling space division multiplexing communication with directivity control by a communicating party;
generating a transmitting weight from a result of the said channel estimation result;
measuring a time for generating the transmitting weight;
multiplying a the transmission signal by the said generated transmitting weight, when the said determination is that space division multiplexing communication with directivity control is possible and when the time for generating the transmitting weight is less than a predetermined time, and multiplying the transmission signal by “1” as the transmitting weight, when the said determination is that space division multiplexing communication with control directivity is not possible and when the time for generating the transmitting weight is equal to or greater than the predetermined time; and
transmitting the transmission signal multiplied by the said transmitting weight.